

**REMARKS**

Entry of the amendments is respectfully requested. Claim 10 has been amended. New claims 13-20 have been added. Therefore claims 1-20 are pending in the application. Favorable consideration and allowance of this application is respectfully requested in light of the foregoing amendments and the remarks that follow.

**Rescinding of Office Action**

Applicant notes with appreciation the Examiner's rescinding of the Office Action mailed on February 5, 2005 in favor of the non-final Office Action subsequently mailed March 10, 2005.

**Recapitulation of the Invention<sup>1</sup>**

The present invention is directed to a process of crimping a contact on an end of a wire that includes the steps of radially tightening a first jaw in a crimping manner on the shaft so as to crimp it on a first level on the end of the wire. The first jaw is maintained in a tightened position and a second jaw is moved along the shaft to crimp it over its length around the end of the wire. The claimed process provides for a connection between the contact and the wire both at the end strands of the cable as well as the sheath of the cable. The first crimping performed by the first jaw ensures the position of the wire strands relative to the contact sleeve. As the remainder of the sleeve is crimped by wire drawing, the length of the strands crimped within the sleeve have a length that more accurately corresponds to the intended dimensions. Pushing back and breakage of the wire within the sheath is also prevented and a more reliable connection between the cable and the contact results.

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<sup>1</sup> The recapitulation section above is intended to provide the Examiner with some background information on the state of the art to help better understand applicants' inventive contribution. It is *not* intended to distinguish any specific claim from the prior art. That task is performed below.  
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### **Summary of Claim Rejections**

In this Office Action, the Examiner has rejected claims 1-10 under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 5,546,653 to Tournier et al. (the Tournier patent).

### **Allowable Subject Matter**

The indication that claims 11 and 12 are allowable is noted with appreciation.

### **Rejections Under 35 U.S.C. § 103(a)**

Claims 1-10 stand rejected under 35 U.S.C. 103(a) as being unpatentable over the Tournier patent. Applicants respectfully traverse the rejection because, as is discussed below, the Tournier patent does not disclose, teach or suggest each and every element of the novel subject matter disclosed and set forth in the claims. Specifically, Tournier does not disclose the use of a first jaw to radially tighten around a wire *to crimp it* on a first level on the end of the wire. Therefore, reconsideration is in order and is respectfully requested.

Independent claim 1 recites a process of crimping a contact on an end of a wire. The claimed process includes the steps of radially tightening a first jaw in a crimping manner on the shaft so as to crimp it on a first level on the end and maintaining this first jaw in a tightened position, while moving a second jaw along the shaft to crimp it over its length around the end of the wire. Independent claim 9 similarly recites a process for crimping a contact on an end of a wire that includes the step of radially tightening a first jaw along the interior shaft to crimp it at or adjacent the end to be crimped. Amended claim 10 recites a process including the step of radially tightening a first jaw on the shaft of the contact to crimp it at a first location of the end of the wire. As indicated by the underscored material, each independent claim includes a limitation reciting the use of a *first jaw* to *crimp* the wire at or adjacent to its *end*.

As best illustrated by Figs. 2-7, the Tournier patent discloses a crimping tool that includes a gripping plier 50 and crimping pistons 60. The element 10 to be crimped is placed in a recess

48 in the tool, and is gripped by the plier 50. The crimping pistons 60 are then moved along the element to crimp it.

Contrary to the Examiner's suggestion, the Tournier patent does not disclose a first jaw which can be radially tightened in a crimping manner on the shaft of a wire so as to crimp it on a first level on the end of the wire. The Examiner correctly indicates the alleged first jaw pair, or gripping plier 50 is used to grip the contact while the contact is moved. However, the gripping plier 50 does not perform a crimping function on the end of the wire. The crimping is instead performed entirely by the crimping pistons 60.

The specification of the Tournier patent describes this alternative function of the gripping plier:

Consequently, as soon as the gripping plier 50 moves rearwards in accordance with the longitudinal axis of the recess 48, the bosses 56 penetrate the smaller diameter portion 48b of the recess 48, in such a way that the noses 54 of the plier close on the cylindrical portion 22 of the end element 10 and bear against the shoulder 20. A rearward displacement of the gripping plier 50 consequently has the effect of drawing the end element 10 in the same direction. Moreover, the gripping plier 50 remains locked on the end element until it has returned into its front loading position. (Col. 5 Lines 1-9)

The operator then actuates the mobile handle 42, which displaces the gripping plier 50 and the annular member 64 in the rearwards direction. As from the start of this displacement, *the gripping plier 50 closes on the cylindrical surface 22 of the end element 10*, under the effect of the penetration of the bosses 56 into the smaller diameter portion 48b of the recess 48. *The noses 54 are then anchored against the shoulder 20 of the end element 10*, so that the later is drawn towards the rear during the remainder of the displacement of the gripping plier 50. (Col. 7 Lines 30-39)

As indicated by the above passages, there is not teaching or suggestion of using the gripping plier to crimp the cable at its end. Furthermore, as illustrated by Figs. 3-7 the gripping plier 50 is not even capable of crimping the end of the wire as recited in the claims. The forward portion of the end noses 54 of the jaws 52 do not even extend far enough onto the end element 10 to crimp the end of the cable 12. As illustrated by each of the figures, the jaws 52 of the gripping plier bear on the shoulder 20 of the end element 10 at a position wherein the noses 54 are behind

the end of the cable 12. Thus, even if the gripping forces applied by the jaws 52 were sufficiently strong enough to crimp the cable, such a function could not be performed due to the orientation of the jaws 52 and cable within the crimping tool. Clearly, the jaws 52 are not capable of performing the claimed crimping function.

The claimed invention provides a significant improvement over the Tournier patent and the rest of the prior art. The invention provides for a connection between the contact and the wire both at the end strands of the cable as well as the sheath of the cable. The first crimping performed by the first jaw ensures the position of the wire strands relative to the contact sleeve. Thus, when the remainder of the sleeve is crimped by wire drawing, the length of the strands crimped within the sleeve has a length that more accurately corresponds to the intended dimensions. Pushing back and breakage of the wire within the sheath is prevented. The claimed process results in a more reliable connection between the cable and the contact and reduces the effects of corrosion and differential expansion induced by temperature variations.

Clearly, the Tournier patent does not disclose each and every element of claim 1, 9 and 10. Accordingly, Applicants respectfully request withdrawal of the rejection. Dependent claims 2-8 are believed to be in condition for allowance for incorporating by reference the limitations of claim 1 and for defining additional features of the invention, which, when considered in combination with those of claim 1, are not anticipated nor rendered obvious by the prior art relied upon in the rejection.

#### **Newly Presented Claims**

Dependent claims 13, 15, 16 and 18-20 are each believed to be presented in condition for allowance because each not only independently recites patentable subject, each also ultimately depends from an independent claim that is itself believed presented in condition for allowance.

Independent claim 14 is believed presented in condition for allowance and its allowance is respectfully requested. None of the references of record, including the Tournier patent, disclose,

teach or suggest the claimed process including a jaw that radially tightens not only to crimp the contact but also to constrain relative contact movement.

Independent claim 17 is believed presented in condition for allowance because none of the prior art of record, alone or in combination with each other or some other reference of record, discloses, teaches or suggests, among other things, the limitations recited in method steps (e) and (f).

**Conclusion**

All of the claims as amended are believed to define patentable subject matter and to be in proper form for allowance. New claim 13 is also believed to be in condition for allowance. Therefore, consideration and allowance of claims 1-13 are respectfully requested.

Enclosed is a check in the amount of \$850 covering a two-month extension of time from June 10, 2005 to August 10, 2005 (\$450) to respond and the addition of two additional independent claims over the previous number of independent claims (\$400). The Commissioner is also authorized to charge payment of any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1170.

Please feel free to contact the undersigned if it would expedite matters.

Respectfully submitted,



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